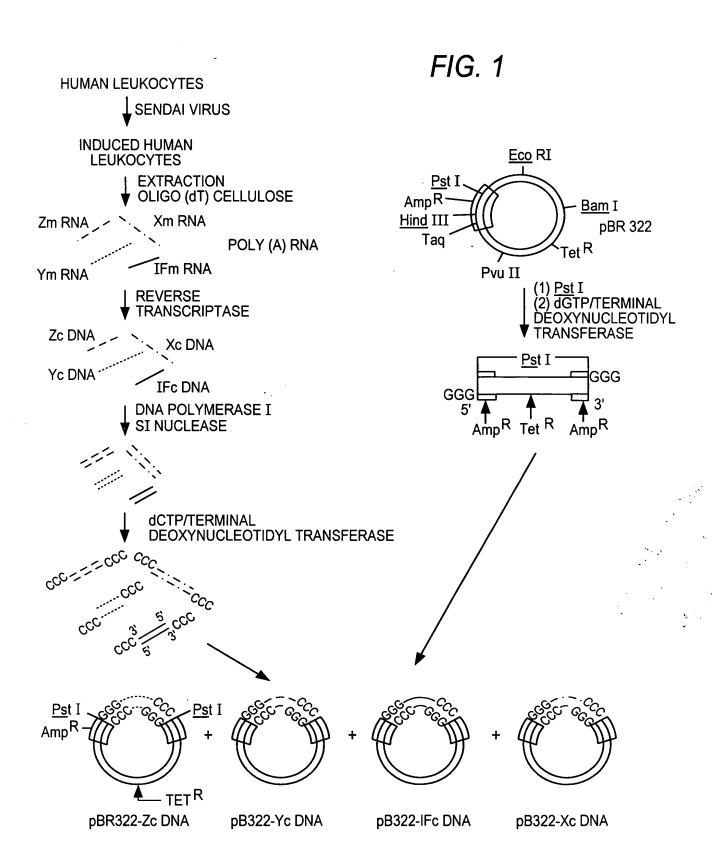
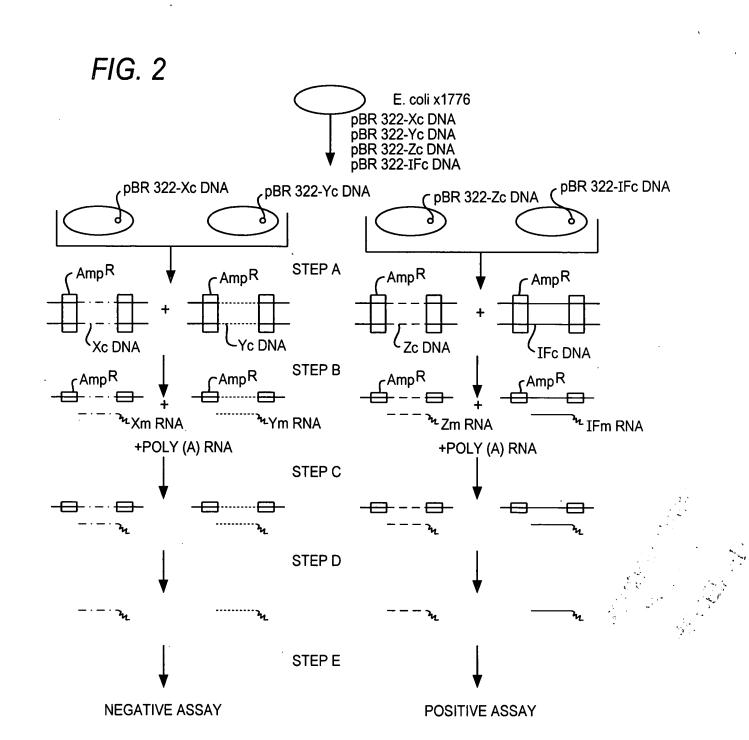


Applicants: Charles Weissman Application No.: 08/487,280 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULAND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 1 of 31



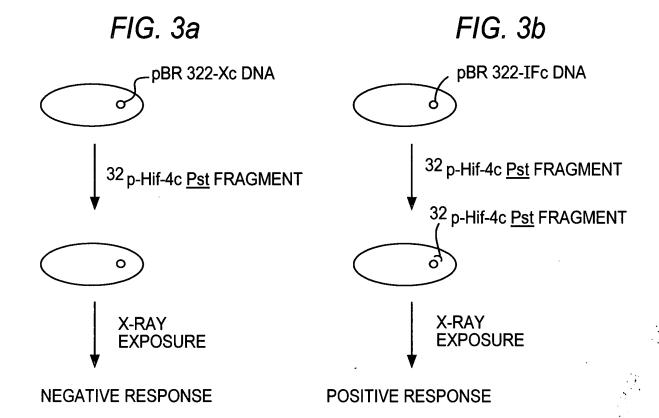


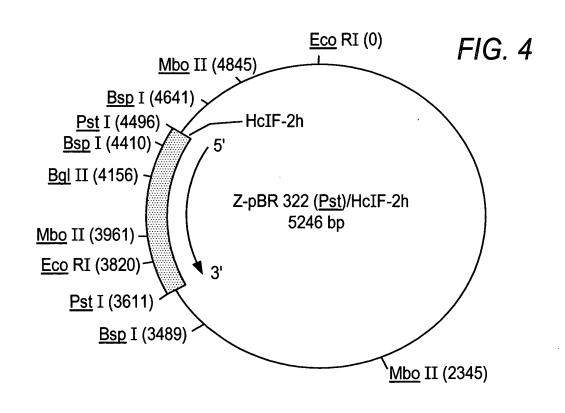
Applicants: Charles Weissman Application No. 08/487,280 Fi 6/7/95Title: DNA SEQUENCES RECOMBINANT MOLECUL. AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000
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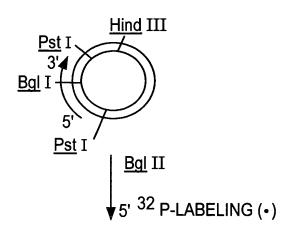


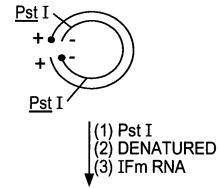


Applicants: Charles Weissman Application No.: 08/487,280 F 67/795Title: DNA SEQUENCES RECOMBINANT MOLECULA AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attomey James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 4 of 31

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FIG. 5a





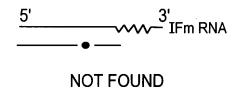
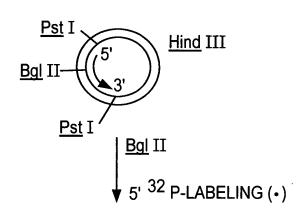
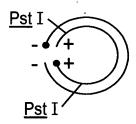
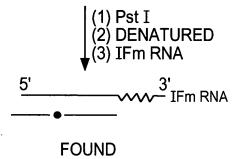


FIG. 5b







Applicants: Charles Weissman Application No.: 08/487,280 Filed: 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULES AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES DOCK! No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 5 of 31

5/31 AIGAGIATICAACATITCCGIGICGCCCTIATICCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCGCTGCAGCAATG***

25

ATGAGTATICAACATITCCGIGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCCGCTGCAATG MetSerI!eGInHisPheArgValAlaLeuIleProPhePheAlaAlaPheCysLeuProValPheAlaHisProLeuGInGIn

MetSerIleGInHisPheArgValAlaLeuIleProPhePheAlaAlaPheCysLeuProValPheAlaHisArgCysSerAsn

CCTGCAGCAATG" ProAlaAlaMet

CTGGTG 29 LeuVai

pKT279

pKT280

pBR322

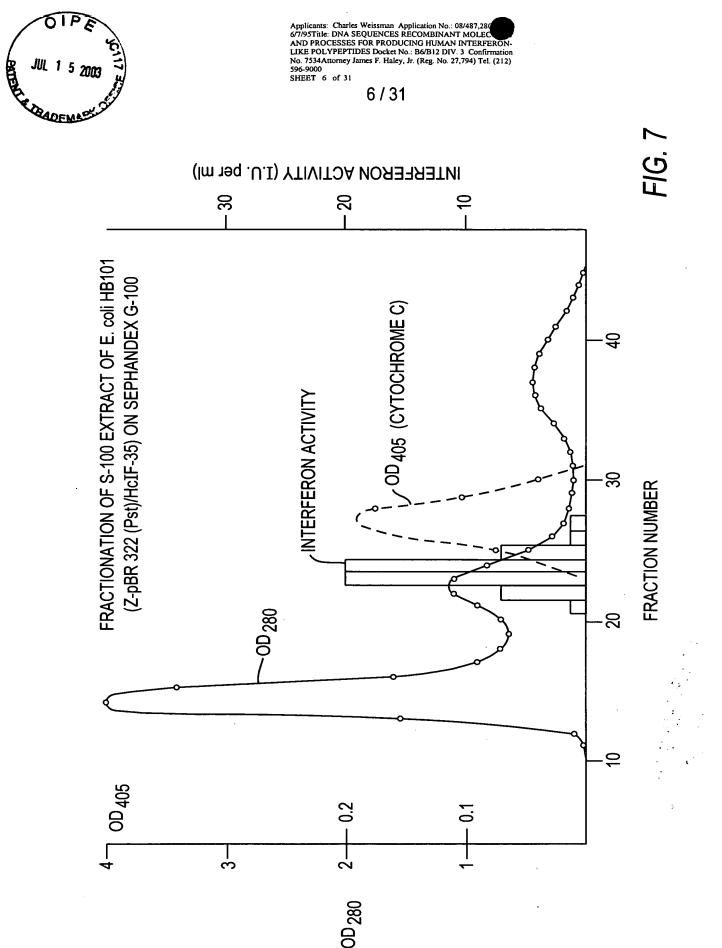
Pst

ATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCAGAAACG MetSerIleGInHisPheArgValAlaLeuIleProPhePheAlaAlaPheCysLeuProValPheAlaHisProGluThr

2

MetSerIleGInHisPheArgValAlaLeuIleProPhePheAlaAlaPheCysLeuProValPheAlaHisProGluThr... ATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACG pKT287

GCTGCAGCAATG *** AlaAlaAlaMet





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Applicants: Charles Weissman Application No.: 08/487,280 Filed; 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULES AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation James F. Haley, Jr. (Reg. No. 27,794) Tel. (212)

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Ess RII 7/31 G_{23} ctctaggttcagagtcaccatctcagcaagcccagaagtatctgcaatatctacgatggcctcgccctttgctttactgatgatcctg METALASERPROPHEALALEULEUMETVALLEU VALVALLEUSERCYSLYSSERSERCYSSERLEUGLYCYSASPLEUPROGLUTHRHISSERLEUASPASNARGARGTHRLEUMETLEULEU Ava II 170 160 9 Dde I Eco PI 140 **S**20 Dde I Pvu II 8

Eco RII



Applicants: Charles Weissman Application No.: 08/487,280 Fi 6/7/95Tule: DNA SEQUENCES RECOMBINANT MOLECUL AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000
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	SHEE	T 8 of 31	
	A TRPASP T T GGGA T	8 / 31	LGLYGLU GGGAGAA
350	GLNLYSALAPROALA!LESERVALLEUH!SGLULEU!LEGLNGLN!LEPHEASNLEUPHETHRTHRLYSASPSERSERALAALATRPASP. CAGAAGGCTCCAGCCATCTCCATGAGCTGATCCAGCAGATCTTCAACCTCTTTACCACAAAAGATTCATCTGCTGGGAT AluMboI / Bgl II	440	EUTYRGLNGLNLEUASNASPLEUGLUALACYSVALMETGLNGLUGLUARGVALGLYGLU TCTACCAGCAGCTGAATGACTTGGAAGCCTGTGATGCAGGAGGAGGGGGGGG
340	LYSASPSI AAAGATT(Hinf	430	.METGLNGI SATGCAGG/ SfaNI
20	RTHR CACA	100	SVALI TGTG
330	ILEUPHETH CCTCTTTAC	420	IGLUALACY IGAAGCCTG
320	SATCTTCAAC	410	ASNASPLEL AATGACTTG
310	ATCCAGCAG BgII	400	RGLNGLNLEU CCAGCAGCTG E00P15 PvuII
90	SLULEUI SAGCTGA uMbo I EcoP15	06	UTYR CTAC E
300	LEUHISGL CTCCATGA Alulv	390	
290	I LESERVAL ATCTCTGTC	380	LYSPHECYS AAATTCTGC
280	GLNLYSALAPROALAILESERVALLEUHISG CAGAAGGCTCCAGCCATCTCTGTCCTCCATG Alu	. 370	GLUASPLEULEUASPLYSPHECYSTHRGLUL GAGGACCTCCTAGACAAATTCTGCACCGAAC Ava I
50	GLNLYS	360	GLUASP GAGGAC Ava I

THRPROLEUMETASNALAASPSERILELEUALAVALLYSLYSTYRPHEARGARGILETHRLEUTYRLEUTHRGLULYSLYSTYRSERPRO ACTCCCCTGATGAATGCGGACTCCATCTTGGCTGTGAAGAAATACTTCCGAAGAATCACTCTCTATCTGACAGAGAAGAATACAGCCCT Mbo II Mbo II Mbo II

FIG. 9

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Application. Clear Weissian Application No.: 03497,2801
67/957tife: DNA SEQUENCES RECOMBINANT MOLECU
AND PROCESSES FOR PRODUCING HUMAN INTERFERON.
LIKE POLYPEPTIDES Docket No.: B6/Bil 2 DIV. 3 Confirmation
No. 7534Attomey James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 9 of 31

TGTTCATATAACGT

TAAATTAT

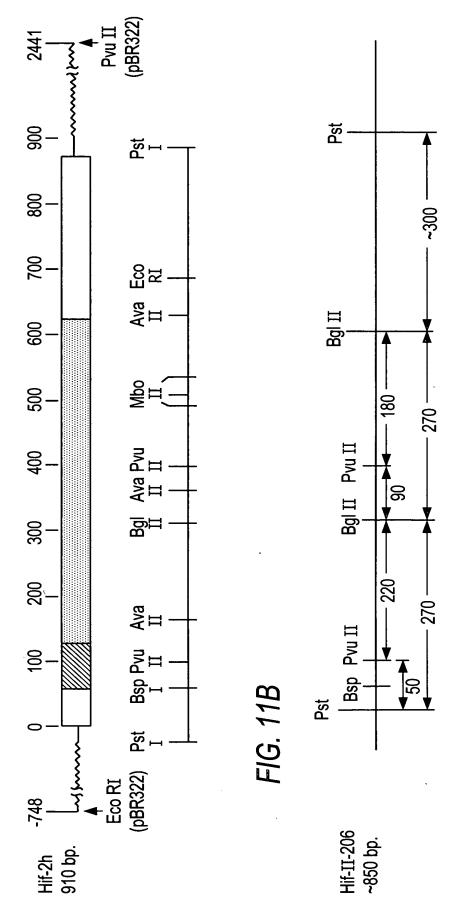
9/31 TCAAAGACTCTCACCCCTGCTA CYSALATRPGLUVALVALARGALAGLUILEMETARGSERLEUSERLEUSERTHRASNLEUGLNGLUARGLEUARGARGLYSGLU 륟 Ë TATTGACTCATACACCAGGTCACGCTTTCATGAATTCTGTCAT EcoRI EcoRII MboII 킆 CTGGTCCAACATGAAAACAATTC1 EcoRII AvaII



FIG. 11A

Applicants: Charles Weissman Application No.: 08/487,2 dc: 6/7/95Title: DNA SEQUENCES RECOMBINANT MOLE SAND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 10 of 31

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G₁₃.TTACTGGTGGCCCTC

-50

G₂₃CTCTAGGTTCAGAGTCACCCATCTCAGCAAGCCCAGAAGTATCTGCAATATCTACGATGGCCTCGCCTTTGCTTACTGATGGTCCTG ala ser pro phe ala leu leu met val leu met

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-120

2h(I)

CTGGTGCTCAGCTGCAAGTCAAGCTGCTCTGTGGGCTGTGATCTGCCTCAAACCCCACAGCCTGGGTAGCAGGAGGACCTTGATGCTCCTG ser cys ser Ser leu val leu ser cys lys

val gly CYS ASP LEU PROGLN THR HIS SER LEU GLY SERARGARG THR LEU MET LEU LEU

9

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GTGGTGCTCAGCTGCAAGTCAAGCTGCTCTCTGGGCTGTGATCTCCCTGAGACCCACAGGCCTGGATAACAGGAGGACCTTGATGCTCCTG gly CYS ASP LEU PROGLU THR HIS SER LEU ASP ASNARGARG THR LEU MET LEU LEU cys ser leu ser leu ser cys lys ser <u>k</u>

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2h(I)

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Applicants: Charles Weissman Application No.: 08/487,280 Filed: 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULES AND PROCESSES FOR PRODUCING HUMAN INTERFERON-LIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000
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• SCA CA A A T GA GCA GA A T COTO TO COTO COTO COTO GA TO GA CATO GA COTO TO GA A TO COCCA GA GA GA GO TO TO T GGCAACCAGTTC **GLY ASN GLN PHE** ALA GLN MET SERARG ILE SER PRO SER SER CYS LEU MET ASP ARG HIS ASP PHE GLY PHE PRO GLN GLU GLU PHE ASP GLY ASN GLN PHE CAGAAGGCTCCAGCCATCTCTGTCCTCCATGAGCTGATCCAGCAGATCTTCAACCTCTTTACCACAAAAGATTCATCTGCTGCTTGGGAT. GLN LYS ALA GLU THR ILE PRO VAL LEU HIS GLU MET ILE GLN GLN ILE PHE ASN LEU PHE SER THR LYS ASP SER SER ALA ALA TRP ASP GLN LYS ALA PRO ALA ILE SER VAL LEU HIS GLU LEU ILE GLNGLN ILE PHE ASN LEU PHE THR THR LYS ASP SER SER ALA ALA TRP ASP <u>CAAAAAGGCTGAAACCATCCCTGTCCTCCATGAGATGATCCAGCAGATCTTCAATCTTCAGCACAAAGGACTCATCTGCTGGTGGAT</u> 230 220 ALA GLN MET ARGARG ILE SER LEU PHE SER CYS LEU LYS ASPARG HIS ASP PHE GLY PHE PRO GLN GLU GLU PHE 2 2 2 **\$** 200 98 8 8 က္က 8 170 8 8 150 20 50 ය -20 2 206(II) 206(II) 2h(I) 2h(I)

FIG. 13

Applicants: Charles Weissman Application No.: 08/487,280 Fi 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULE. AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 13 of 31

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GAGGACCTCCTAGACAAATTCTGCACCGAACTCTACCAGCAGCTGAATGACTTGGAAGCCTGTGTGATGCAGGAGGAGAGGGGGAGAA THR PRO LEU MET LYS GLU ASP SER ILE LEU ALA VAL ARG LYS TYR PHE GLN ARG ILE THR LEU TYR LEU LYS GLU LYS LYS TYR SER PRO THR PRO LEU MET ASN ALA ASP SER ILE LEU ALA VAL LYS LYS TYR PHE ARGARG ILE THR LEU TYR LEU THR GLU LYS LYS TYR SER PRO GLU THR LEU LEU ASP LYS PHE TYR THR GLU LEU TYR GLN GLN LEU ASN ASP LEU GLU ALA CYS VAL ILE GLN GLY VAL GLY VAL THR GLU GLU ASP LEU LEU ASP LYS PHE CYS THR GLU LEU TYR GLN GLN LEU ASN ASP LEU GLU ALA CYS VAL MET GLN GLU GLU ARG VAL GLY GLU ACT<u>CCCCTGATGAAGGAGGACTCCATTCTGGCTGTGAGGAAATACTTCCAAAGA</u>ACTCACTCTCTATCTGAAAGAGAAGAAATACAGCCT 9 130 9 130 230 8 370 360 120 È 360 ട 260 340 250 110 8 240 330 206(II) 206(II) 2h(I) 2h(I)

FIG. 14

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	420	430	440	450	460	470	480	490	200
206(II)	TGTGCCTGGGAGGTTGTCAGAGCAGAAATCATGAGATCTTTTTTTT	TTGTCÅGAGC, AL VAL ARG AL/	AGAAAİCATG A GLU ILE MET	AGAICITTIC ARG SER PHE SE	STITGİCAACAA ER LEU SER THRA	ACȚTGCAAGA SN LEU GLN GI	AAGTTTAA(USERLEUAF	SĄAGTŻAGGAĄ KG SER LYS GLU	,TGA,AA,
	140			150			160	165	
£,10	160 CYS ALA TRP GLU VAL VAL ARG ALA GLU ILE MET ARG SER LEU SER LEU SER THRASN LEU GLN GLUARG LEU ARGARG LYS GLU	AL VAL ARG ALZ	A GLU ILE MET	150 ARG SER LEU SE	ER LEU SER THRA	16 SN LEU GLN GI	160 GLU ARG LEU AR	166 GARG LYS GLU	- - - - - - - - - - - - -
(T)uz	. 1919-0019-00	430	440 - 440	450 450	460	470 ,	4480	รัฐAตร์สหลัดหน	- AACA I. 500
	510	520	530	540	250	260	920	280	
206(II)	CIGGIICAACAIGGAAAIGAIIIICAIIGAIICGIAIGCCAGCICACCIIIIIAIGAICIGCCAIIICAAAGACICAIGIIICIGCIA	SAAATĠATTT	тсаттĠаттс	GTATGCCAGC1	гсассттттат	GATCTGC	атттсааа	застсатстт	ствста

2h(I)



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2h(I)

206(II) GACCATGCTGAC29

2h(I)



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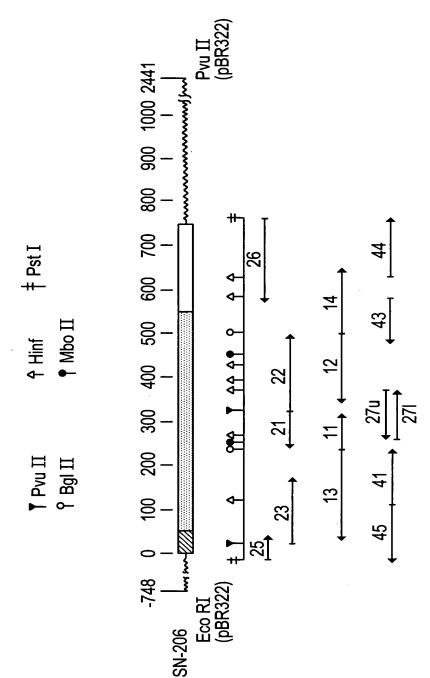
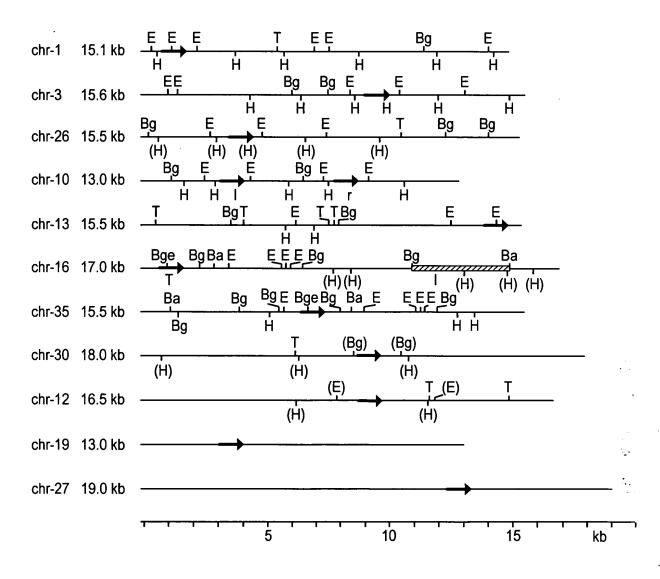






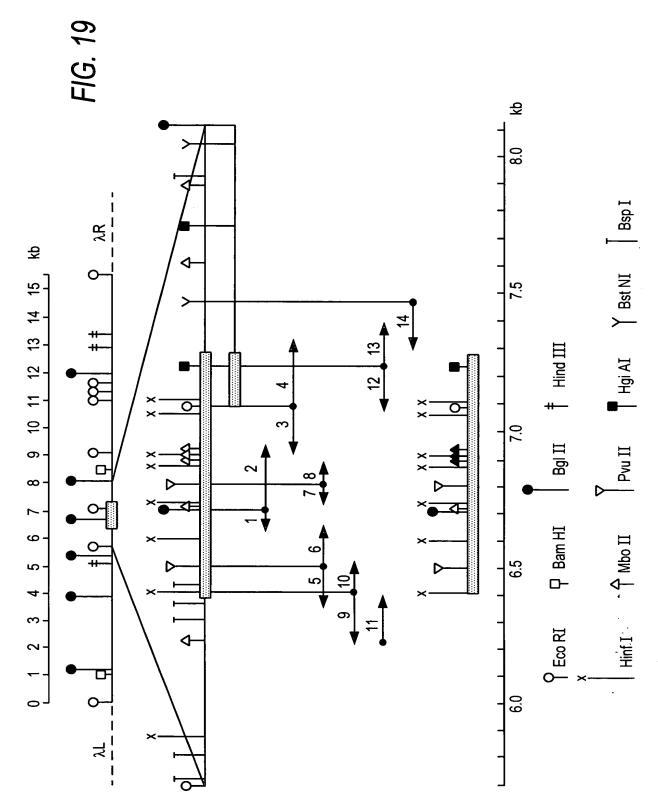
FIG. 18

PARTIAL RESTRICTION MAPS OF CLONED, IFN- α RELATED CHROMOSOMAL DNA SEGMENTS



E: Eco RI, Ba: Bam HI, Bg: Bgl II, Hinc III, T: Tac I

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S10

AAAACAAAACATTTGAGAAACACGGCTCTAAACTCATGTAAAGAGTGCATGAAGGAAAGCAAAAACAGAAATG

GCCCAAGGTTCAGAGTCACCCATCTCAGCAAGCCCAGAAGTATCTGCAATATCTACGATGGCCTCGCCCTTTGCTTTACTGATGGTCCTG metalaserprophealaleuleumetmetvalleu Eco RII S F

GIGGIGCICAGCIGCAAGICAAGCIGCICTCIGGGCIGIGAICICCCIGAGACCCACAGCCIGGAIAACAGGAGGACCITGAIGCICCIG Mbo I Dde I Fra Pro II Alu I Sta NI Eco RII 40 valvaljeusercyslyssersercysserleuglyCYSASPLEUPROGLUTHRHISSERLEUASPASNARGARGTHRLEUMETLEULEU Eco PI Dde I S20 Dde I

20 / 31

ALAGLINMETSERARG I LESERPROSERSERCYSLEUMETASPARGH I SASPPHEGL YPHEPROGLINGLUGLUPHEASPGL YASNGLINPHE 8 2

GLNL YSALAPROALA I LESERVALLEUH I SGLULEU I LEGLNGLN I LEPHEASNLEUPHETHRTHRL YSASPSERSERALAALATRPASP CAGAAGGCTCCAGCCATCTGTGCTCCATGAGCTGATÇCAGCAGATCTTCAACCTCTTTACCACAAAAGATTCATCTGCTGGTTGGGAT 2 Alu MboI 8 220 22

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GLUASPLEULEUASPLYSPHECYSTHRGLULEUTYRGLNGLNLEUASNASPLEUGLUALACYSVALMETGLNGLUGLUARGVALGLYGLU PvuII EcoP15 Avall



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480 THRPROLEUMETASNALAASPSERILELEUALAVALLYSLYSTYRPHEARGARGILETHRLEUTYRLEUTHRGLULYSLYSTYRSERPRO CTGGTCCAACATGAAAACAATTCTTATTGACTCATACACCAGGTCACGCTTTCATGAATTCTGTCATTTCAAAGACTCTCACCCCTGCTA ACTCCCCTGATGAATGCGGACTCCATCTTGGCTGTQAAGAAATACTTCCQAAGAATCACTCTCTATCTGACAGAGAAGAAATACAGCCCT 166 500 CYSALATRPGLUVALVALARGALAGLU1LEMETARGSERLEUSERLEUSERTHRASNLEUGLNGLUARGLEUARGARGLYSGLU 130 160 Ē II òqW 620 Eco RII Mbo II Mbo I 120 150 009 Eco RII 280 4

TAACTATGACCATGCTGATAAACTGATTTATCTATTTAAATATTTTAACTATTCATAGATTTAAATTATTTTGTTCATATAACGT

200

089

CATGTGCACCTTTACACTGTGGTTAGTGTAATAAAACATGTTCCTTATATTTACTCAATCCATTATTTTGTGTTGTTCATTAAACTTTTA 800 Hgi A

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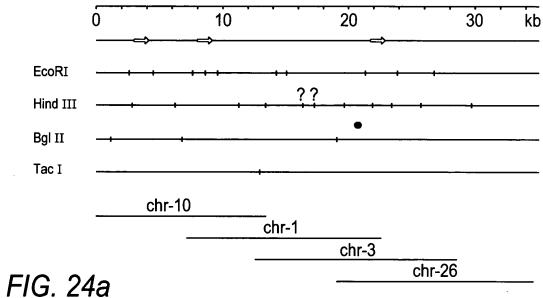
CTATAGGAACTICCTGTATGTGTTCATTCTTTAATATGAAATTCCTAGCCTGACTGTGCAACCTGATTAGAGAATAAAGGGTATATTTA 88



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LINKAGE OF IFN-∞ RELEATED GENES



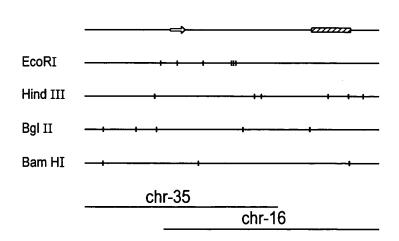


FIG. 24b



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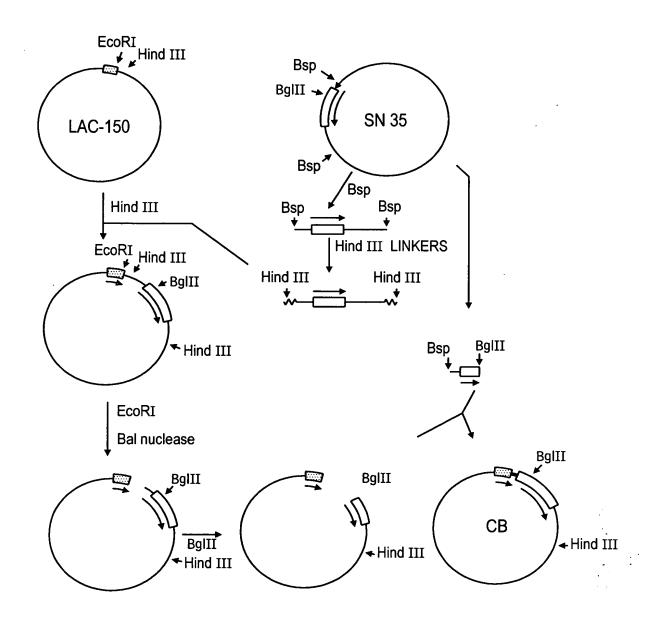
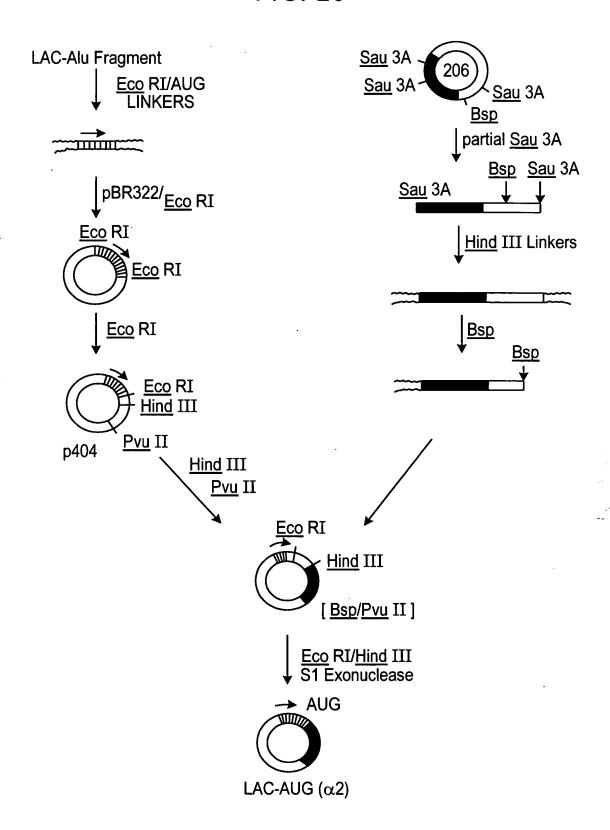


FIG. 25



Applicants: Charles Weissman Application No.: 08/487,280 F 67/95Title: DNA SEQUENCES RECOMBINANT MOLECUL AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 25 of 31

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FIG. 27

CONSTRUCTION OF PLASMID LAC-AUG(α -2)

LAC PROMOTER

IFN-α cDNA

MET
...ACAG|CTATG...
...TGTC|GATAC...
Alu I

LEUGLYCYS ASP CTGGGCTGTGAT... GACCCGACA CTA...

...AAACAG + CTATGAATTCATAG ...TTTCTC + GATACTTAAGTAGC | LIGASE

ACAAGCTTGT+GAT...
TGTTCGAACA+CTA...

LIGASE

Eco LINKER

...ACAGCTATGAATTCATAG ...TGTCGATACTTAAGTATC CYSASP ACAAGCTTGTGAT... TGTTCGAACACTA...

Eco RI S₁NUCLEASE Hind III S₁NUCLEASE

...ACAGCTATG + TGTGAT...
...TCTCGATAC + ACACTA...

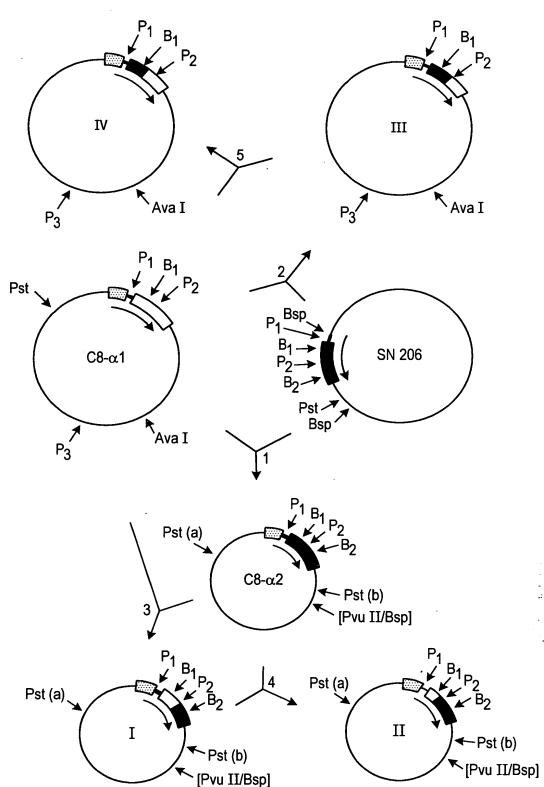
LIGASE

MetCYSASP ...ACAGCTATGTGTGAT...
...TGTCGATACACACTA...



Applicants: Charles Weissman Application No.: 08/487,28 67/95Title: DNA SEQUENCES RECOMBINANT MOLECAND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000
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 $\mathsf{C}_{24} \mathsf{AATGCAAATAGCTJATATATATGATTTATTTCTAGTAAA}$

8

Applicants: Charles Weissman Application No.: 08/487,280 File 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULES AND PROCESSES FOR PRODUCING HUMAN INTERFERON-LIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 28 of 31

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20,

8 400 500 009 TAAACTTAAATTTTAGTTTAGCTTTTCTGTCATTCTTACTTTGAATAAAAGAGCA EcoRI AluI <u> TGTCAAÇTGCTGAAAAGAAAAAGTGTTGGCAACATCTGGATGAATACTGCAGCTGATGAAGTTTACAAATTATTT</u> GTCATATAAAGCAAAATTCAAAGCTTCATACACTAAGAGAAAATTT,TAAAAATTATTCATTCATATTTTTAGGAGTTTTGAATGATTGGATATGTAAT TTGCATATGTAC,TTTGATACAAAATTTACATGAACAAATTACACTAAAGTTATTCCACA 280 380 480 280 PvuII BbrsII 260 360 460 560 EcoRI 240 340 440 540 TATATTCATATTAATGTGTATCTATATAGATTT ATATACTTATCAAATTAAGTTAATGTCAATAGCTTT EcoRI GTTATTCAACACATCAGTAGTT 220 320 420 520



Applicants: Charles Weissman Application No.: 08/487,280 Fi 6/7/95Tale: DNA SEQUENCES RECOMBINANT MOLECUL. AND PROCESSES FOR PRODUCING HUMAN INTERFERON-LIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 29 of 31

800 TAAGAAGC	900 AAACCTAG	1000 3TGCTCAG Ddei Aluī	1100 SAATCTCT II ECORI	HhaII
780 \CATGTGAGAGTGCG	880 \GCAAAGICTTCAGAA MboII	980 eumetalavalleuv TGATGGCCGTGCTGC BSpI	080 EUGLNGLNMETGLYAF GCAACAAATGGGAAC	
AAAACTTTTAAACA	AGACCTATGCACAGA EcoRI	euserpheserieui TGTCCTTTTCTTTAC	GTHRLEU/LELEULE GACCTTGATACTCCT	
760 SATGAAAAAAATGA	860 TATGTTCACTATTTĄ	960 metalal AACATCCAATGGCCC Asul BSpI	1060 SCTGGGTAATAGGAG BstnI MnII	בוכ 30
740 STGAAAATAGGCAAT phI	840 4GAAAATGGAAATTAG	940 3CCCAGCAATATTTGC	1040 FUPROGLNTHRHISSE TGCCTCAGAGCCACAG MnII DdeI	
20 3GCTTTGAGTGCAGG	20 SAACTAGGGAATTTA I EcoRI	20 ATCCATCTCAAGTAG	20 r l eug lycysAsPLE rcTGGGCTGTGATCT Dpn Mbol	
7 GAAAAAATACCATAAAA(8 AAACAGAGATAGAAAGTA(Rsal	93 AGGCCGAAGTTCAAGGTTA Mnli Bspi	10 CTACAAATCCATCTGTTC Asul EcoRI	
	760 TAGGCAATGATGAAAAAATGAAAAACTTTTTAAACACATGTGAGAGTGCGTAAGAA	720 740 760 800 GAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GAAAAAATACCATAAAAAGGCTTTGAGTGCAGGTGAAAAATGGCAATGATGAAAAAAAA	720 740 760 760 780 800

Applicants: Charles Weissman Application No.: 08/487,280 File 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULE AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 30 of 31

1400 TGAGGAAATACTTCCAA MNII	1500 IESERTHRASNLEU TTCAACAACTTGC	1600 TCTTCCATTTCA MboII
	SPH STT	rgagı
1380 7ALASPSER/LELEUALAV STGGACTCCATCCTGGCTG HhaII BstnI	1480 AAATCATGAGATCCCTCTCC EQORI DpnII	1580 ACATTATCTCACACTTTCA ⁻
1360 LUGLUTHRPROLEUMETASNI AAGAGACTCCCCTGATGAAT(MOII HHAII	1460 A TRPGLUVAL VALARGALAGI CTGGGAGGTTGTCAGAGCAGA SstnI MnII	1560 AATGATTCCGACTGACTAATA HhaII
1340 1340 1GATACAGGAGGTTGGGGTGG MNII	1440 ULYSLYSTYRSERPROCYSAL GAAGAAATACAGCCCTTGTGC MboII	1540 TGAAACCTGGTTCAACATGGA BstnI
1320 LEUASNASPLEUGLUALACYSV. ACTGAATGACCTGGAAGCATGTG BstnI	1420 AGAATCACTCTTTATCTAACAGA HhaII	1520 GLNLYSARGLEUARGARGLYSASP AAAAAAAGATTAAGGAAGGATTGAAACCTGGTTCAACATGGAAATGATTCCGACTGACT
	1320 LEUASNASPLEUGLUALACYSVALILEGLNGLUVALGLYVALGLUGLUTHRPROLEUMETASNVALASPSERILELEUALAVALA ACTGAATGACCTGGAAGCATGTGTGATACAGGAGGTTGGGGTGGAAGAGACTCCCCTGATGAATGTGGACTCCATCCTGGTGGA BstnI HhaII HaII HhaII HhaII	1380 SNASPLEUGLUALACYSVALILEGLNGLUVALGLYVALGLUGLUTHRPROLEUMETASNVALASPSERILELEUALAVALATGACCTGGACTCCTGGCTGTGTGGACTCCTGGCTGTGTGGACTCCTGGCTGTGTGTG

FIG. 31



Applicants: Charles Weissman Application No.: 08/487,280 File 67/95Title: DNA SEQUENCES RECOMBINANT MOLECULES AND PROCESSES FOR PRODUCING HUMAN INTERFERONLIKE POLYPEPTIDES Docket No.: B6/B12 DIV. 3 Confirmation No. 7534Attorney James F. Haley, Jr. (Reg. No. 27,794) Tel. (212) 596-9000 SHEET 31 of 31

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ATTGTGGTGGATGTAACGATATGTŢCTTÇATATTTAGCCAATA